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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,993	12/29/2000	Christopher J. Kemp	INTL-0499-US (P10386)	7701

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08/27/2003

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EXAMINER

RIOS CUEVAS, ROBERTO JOSE

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/751,993

Applicant(s)

KEMP ET AL

Examiner

Roberto J Rios

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-14 and 19-30 is/are rejected.
- 7) ☒ Claim(s) 7 and 15-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 8, 9, 11-14, and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Swartz et al (Us patent 4,642,555).

As per claims 1, 11, and 19, Swartz et al (herein after Swartz) teach a method an apparatus comprising an input block (positive voltage node) to apply an input signal to a common input terminal of a sensing block; and a converting block (7, 42) to receive a sensed signal form the sensing block in response to applying the input signal (Figures 1, 2).

As per claims 2, 12, and 20, Swartz teaches the converting block providing a digital output signal based on the sensed signal (Figures 1, 2).

As per claims 3, and 13, Swartz teaches the converting block providing a signal having a fractional pulse density that is indicative of acceleration (col. 2, line 25+).

As per claims 4, 14, and 21, Swartz teaches the input block applying a first signal to the common input terminal during a first clock phase and a second signal during a second clock phase (trigger input; 3, 6).

As per claims 5, Swartz teaches the converting block integrating the sensed signal and provides a first output signal and a second output signal (Figure 2).

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As per claim 6, Swartz teaches the converting block further comparing (22) the first output signal and the second output signal and provides an output signal (Figure 2).

As per claims 8, 9, and 22, Swartz teaches the input block comprising a first input capacitor (2) and a second input capacitor (5), wherein the input block provides a first input signal to the converting block through the first input capacitor and a second input signal to the converting block through the second input capacitor (Figures 1, 2).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10, and 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swartz in view of Kemp (US patent 5,528,520).

As per claims 10, and 24, Swartz teaches providing voltages to the system but does not specifically disclose storing the voltages on a storage unit. However, Kemp teaches a capacitive sensor comprising a memory for storing calibrating voltages (col. 3, line 7).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Swartz with the teachings of Kemp such that a memory unit is provided for the purpose of selectively providing different voltages based on the characteristics of the sensor.

As per claim 23, Swartz teaches all the limitations (Figure 2) except a latch to receive the output signal and to provide a latched output. However, Kemp teaches a capacitive sensor, wherein a latch is provided to receive an output signal and to provide a latched output (Figure 1).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Swartz with the teachings of Kemp such that a latch unit is provided for the purpose of latching the comparator output signal for signal compensation purposes.

As per claim 25, Kemp teaches a restraint system comprising a sensing circuit to: apply an input signal to a sensing block; receive a sensed signal from the sensing block in response to applying the input signal; and provide an output signal based at least in part on the sensed signal (Figure 1); and a deployment block to provide an activation signal based at least in part on the output signal from the sensing circuit (col. 6, line 11) but does not specifically disclose applying an input signal to a common input terminal of the sensing circuit. However, Swartz teaches a capacitive sensor, wherein an input signal is inputted to a common input terminal of a sensing circuit (Figures 1, 2).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Kemp with the teachings of Swartz such that an input signal is inputted to a common input terminal of a sensing circuit for the purpose of providing an output signal representative of a difference of capacitive sensed values.

As per claim 26, the deployment block provides the activation signal to activate an airbag (col. 6, line 11).

As per claim 27, the sensing circuit is clocked using a plurality of non-overlapping clocks (claim 4).

As per claim 28, the sensing circuit provides a digital signal (Out).

As per claim 29, the sensing circuit provides a signal having a fractional pulse density that is indicative of acceleration (claim 6).

As per claim 30, a storage unit (22) to store one or more voltage values to apply to the sensing circuit.

Allowable Subject Matter

5. Claims 7, and 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed on 06/02/2003 have been fully considered but they are not persuasive.

Applicant argues that Swartz does not disclose an input block to apply an input signal to a common input terminal of a sensing block. The Examiner wants to further clarify his rejection. Swartz teaches a sensing block comprising resistors (1) and (4); and capacitors (2) and (5), wherein said sensing block further comprises a common input terminal consisting of two *common* positive nodes connected to resistors (1) and (4) respectively. A positive voltage is connected to said common positive nodes, wherein a positive voltage providing means is inherently present in the circuit. Thus, the positive voltage providing means was construed as the input block in the circuit that is connected to said positive voltage node.

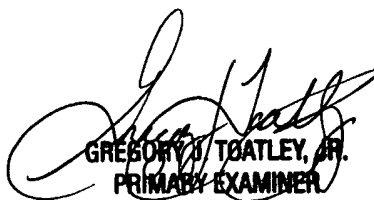
7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication with PTO

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rios whose telephone number is (703) 306-5518. In the event that Examiner Rios cannot be reached, his supervisor, Brian Sircus may be contacted at (703) 308-3119. The fax number for Before-Final communications is (703) 872-9318, for After-Final communications is (703) 872-9319, and for Customer Service is (703) 872-9317.

Roberto J. Rios
Patent Examiner



GREGORY J. TOATLEY, JR.
PRIMARY EXAMINER